

FIG. 1

FIG. 2 is a block diagram of a system for transmitting data over a channel. The system includes a data source 200, a processor 210, and a channel 220. The data source 200 provides data to the processor 210, which then transmits the data to the channel 220. The processor 210 is configured to perform a bin IFFT operation on the data before transmission.

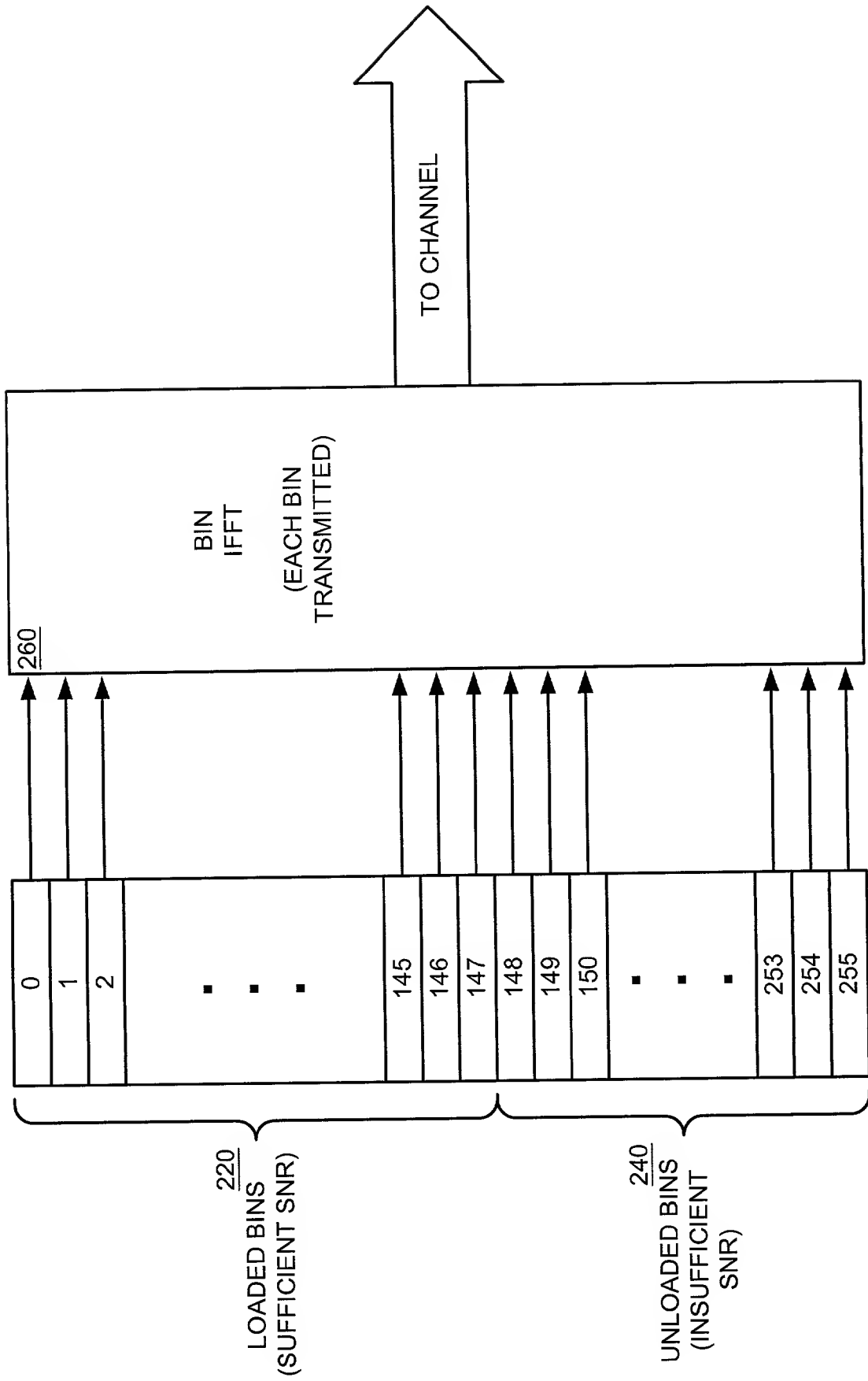


FIG. 2
(PRIOR ART)

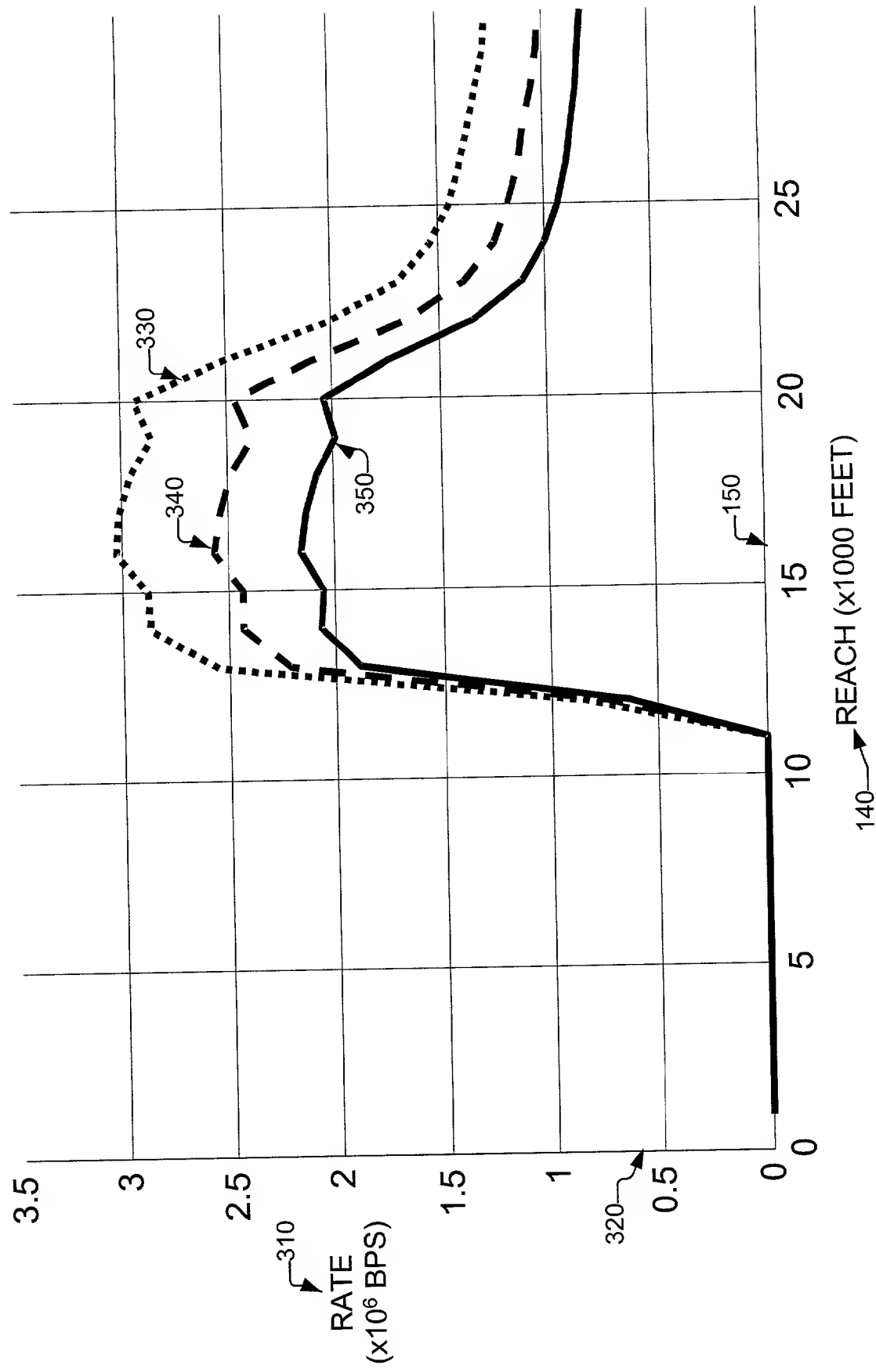


FIG. 3

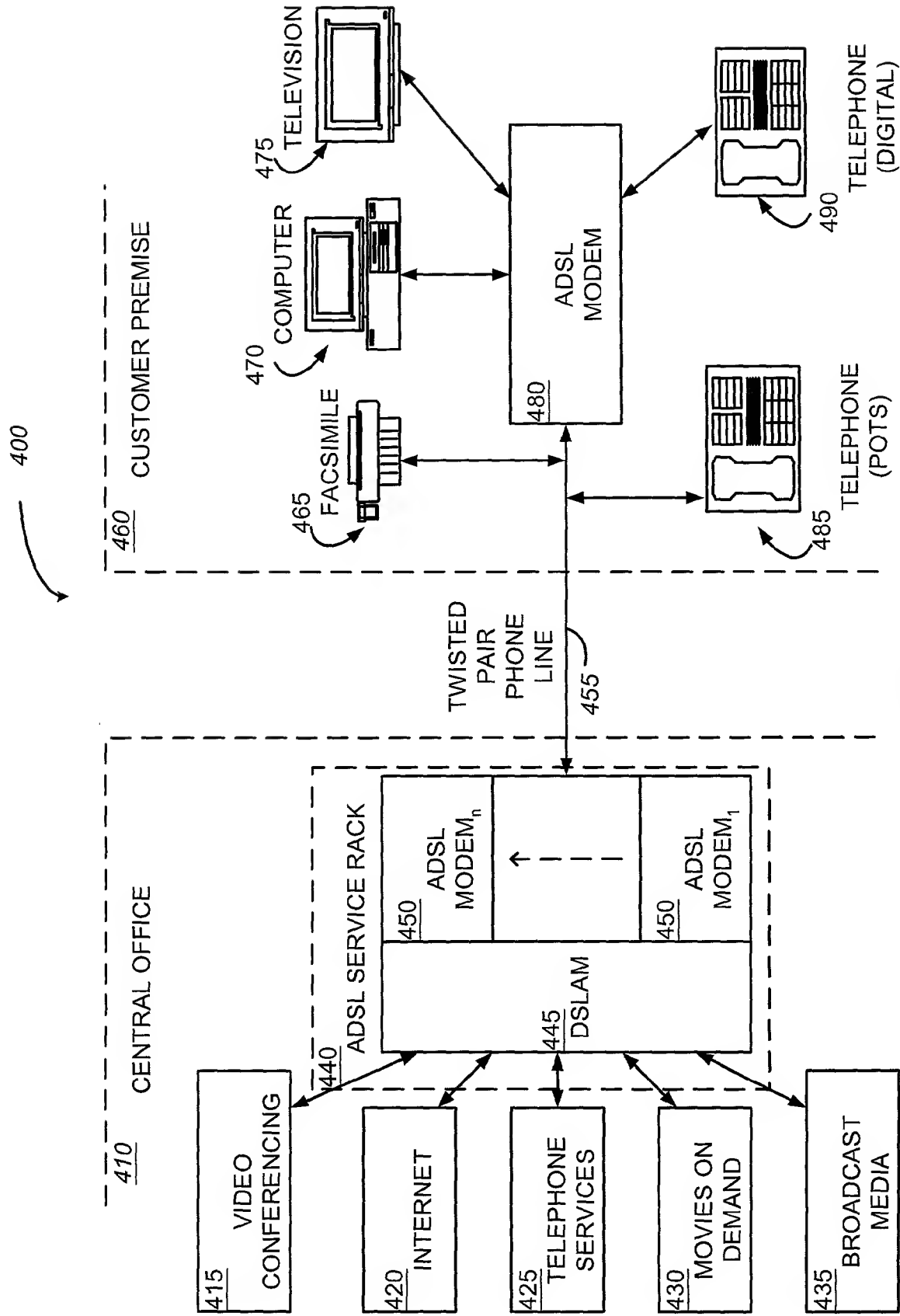


FIG. 4

500

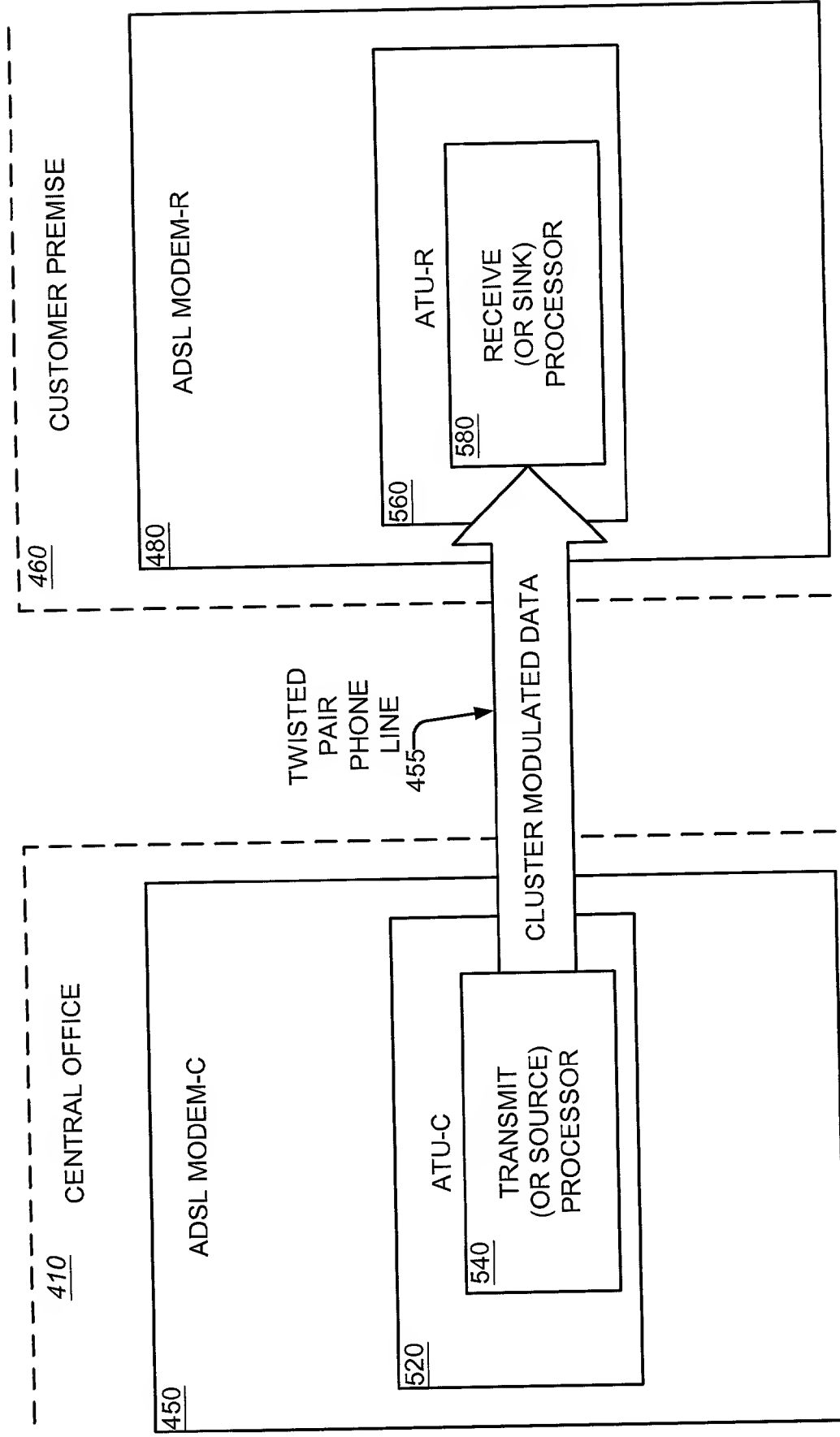


FIG. 5

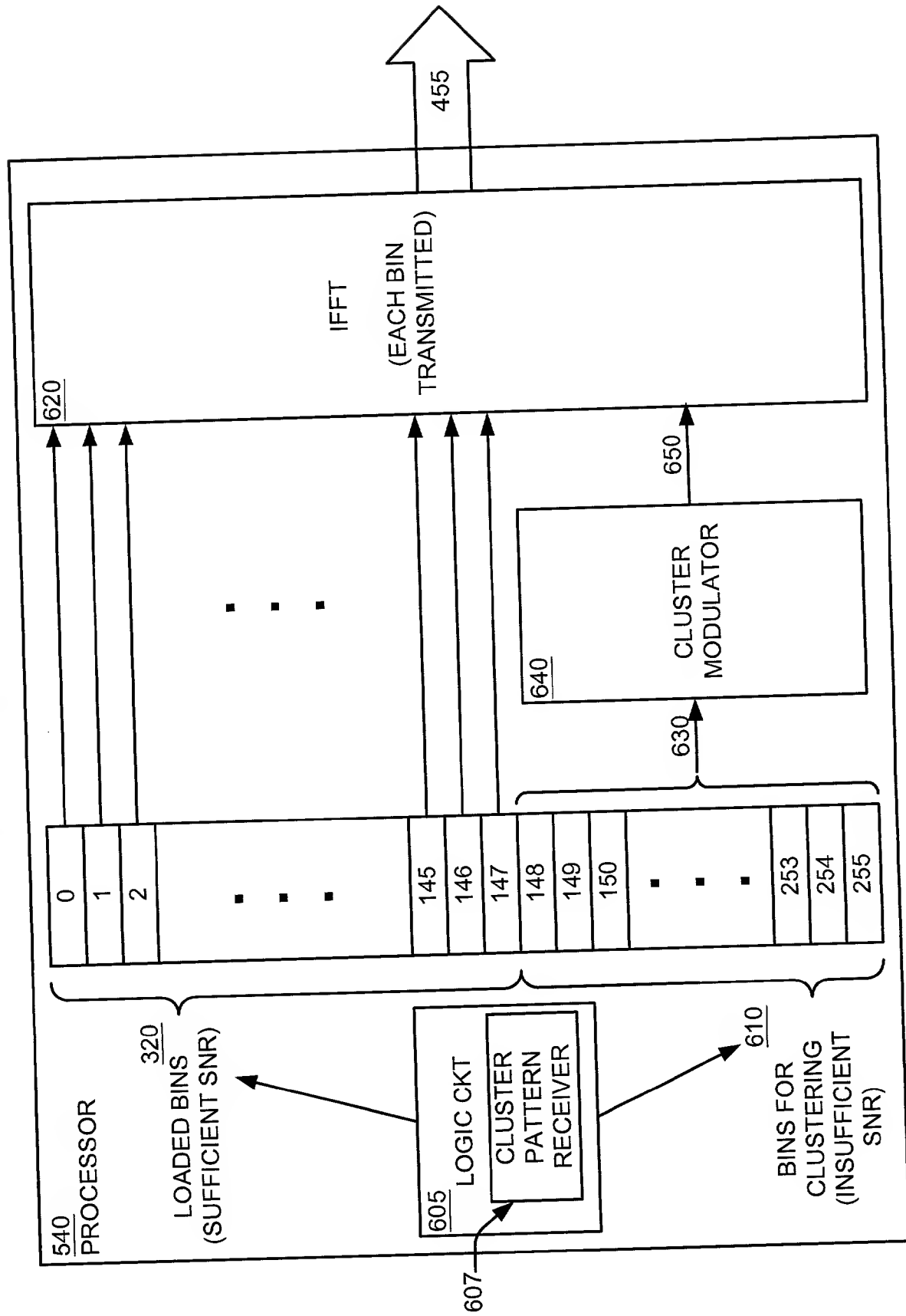


FIG. 6A

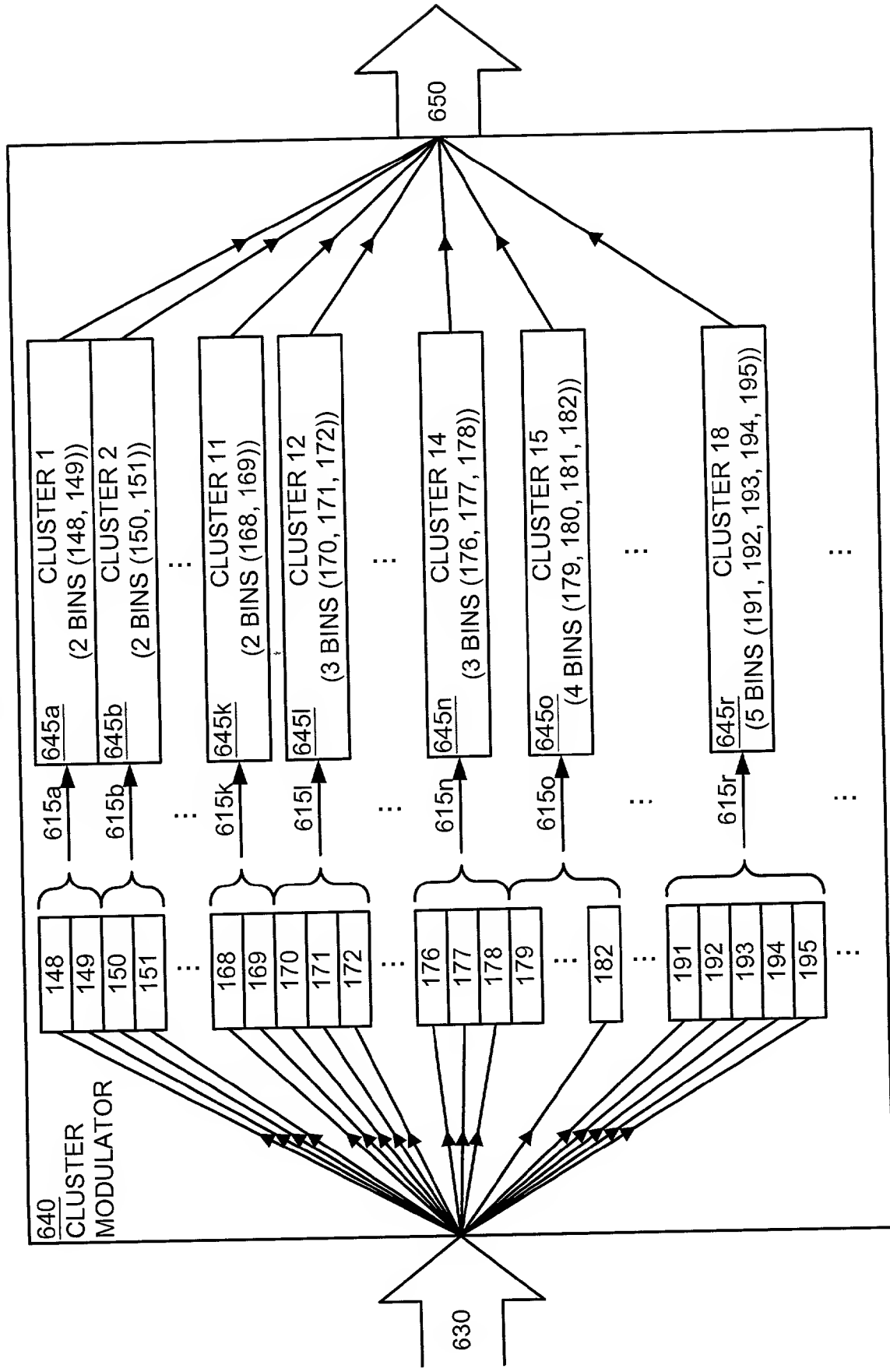


FIG. 6B

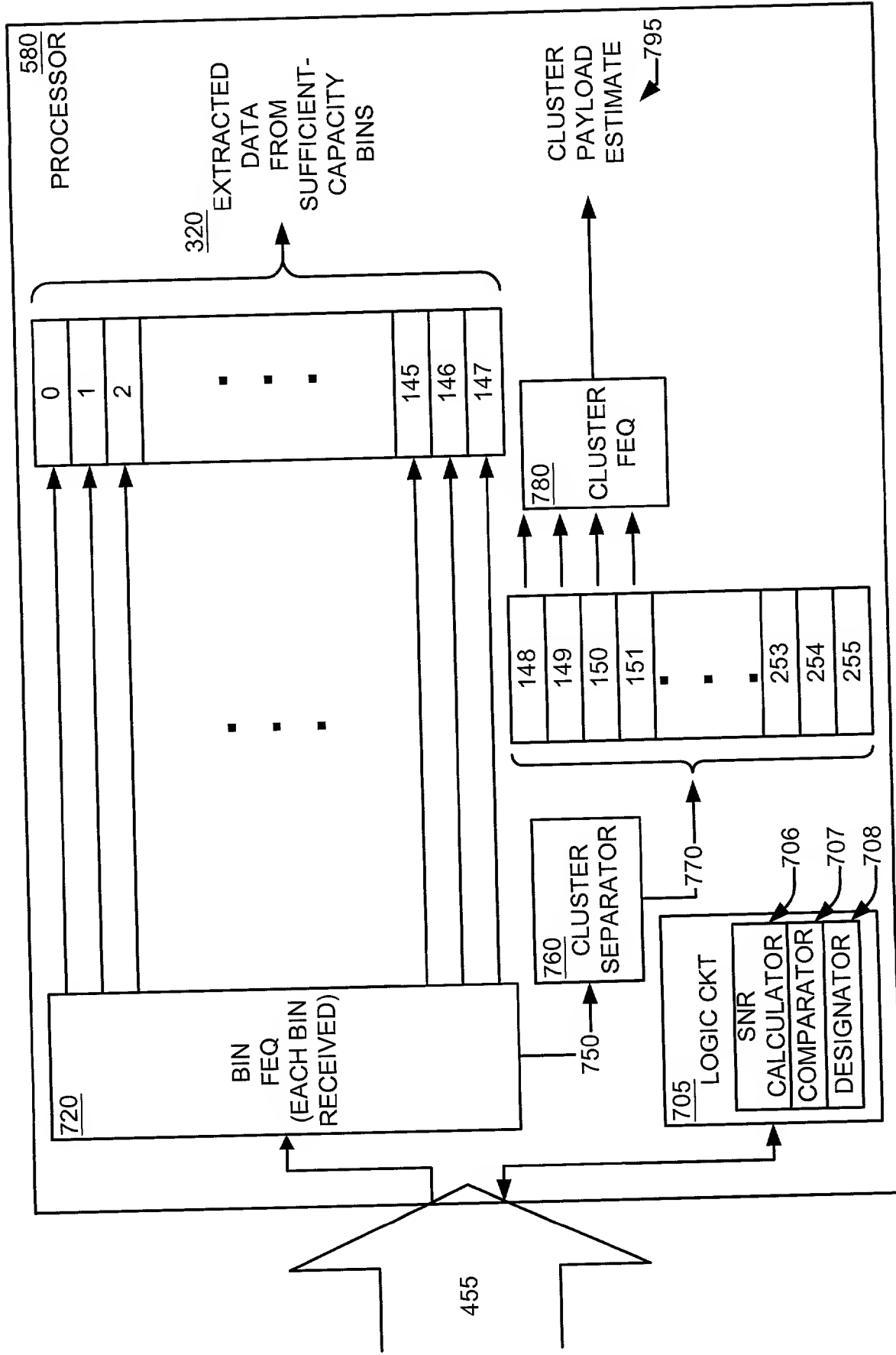


FIG. 7A

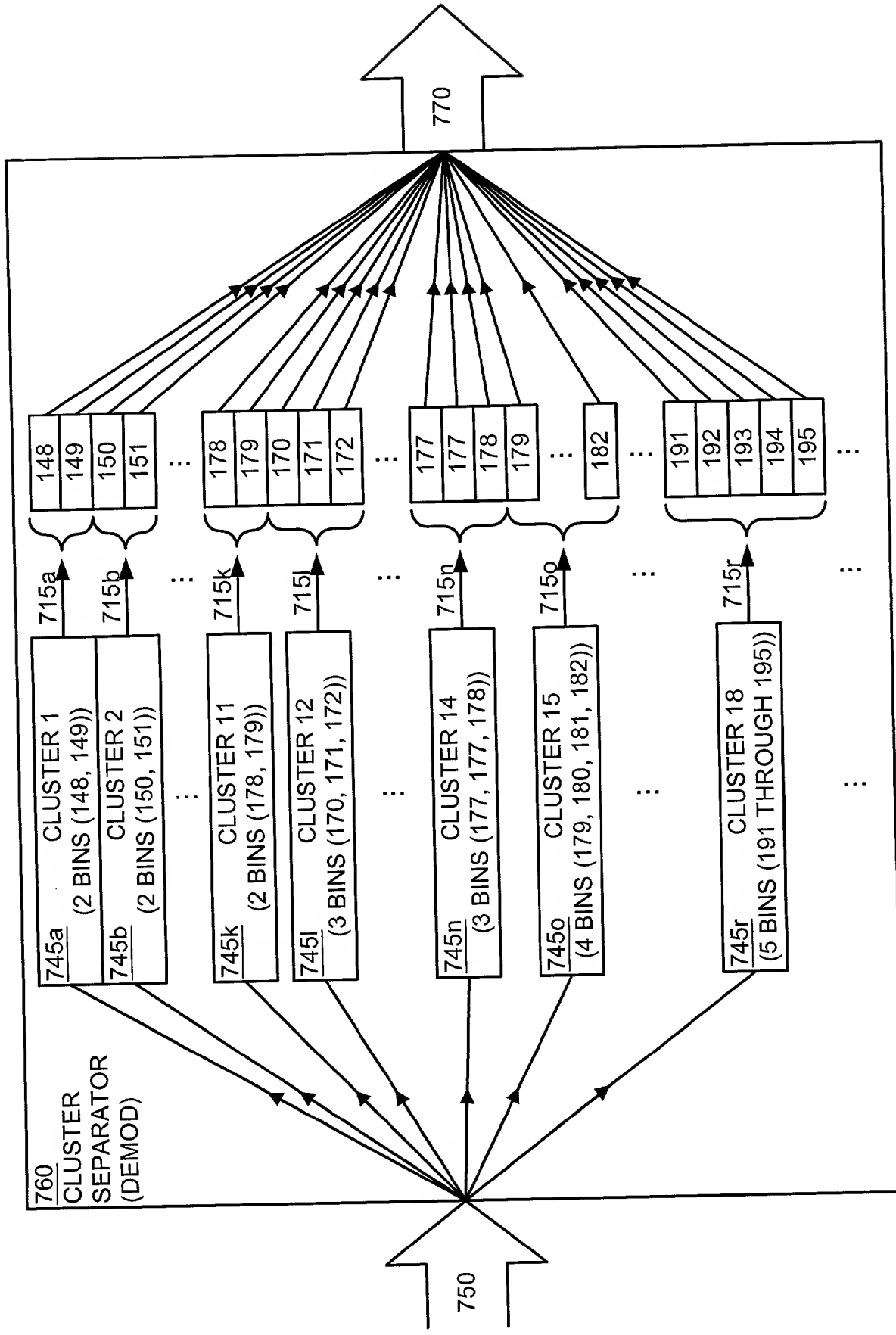


FIG. 7B

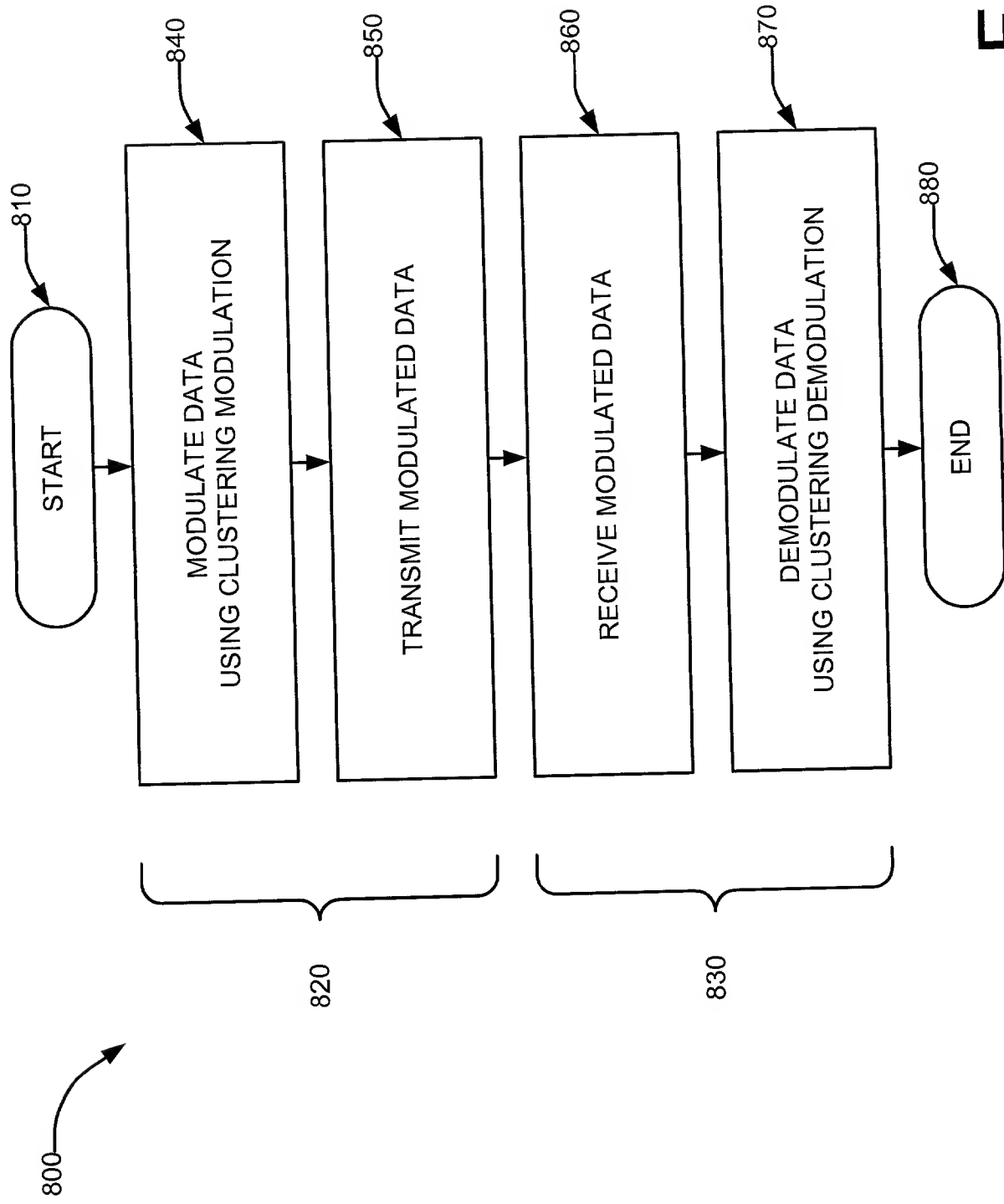


FIG. 8

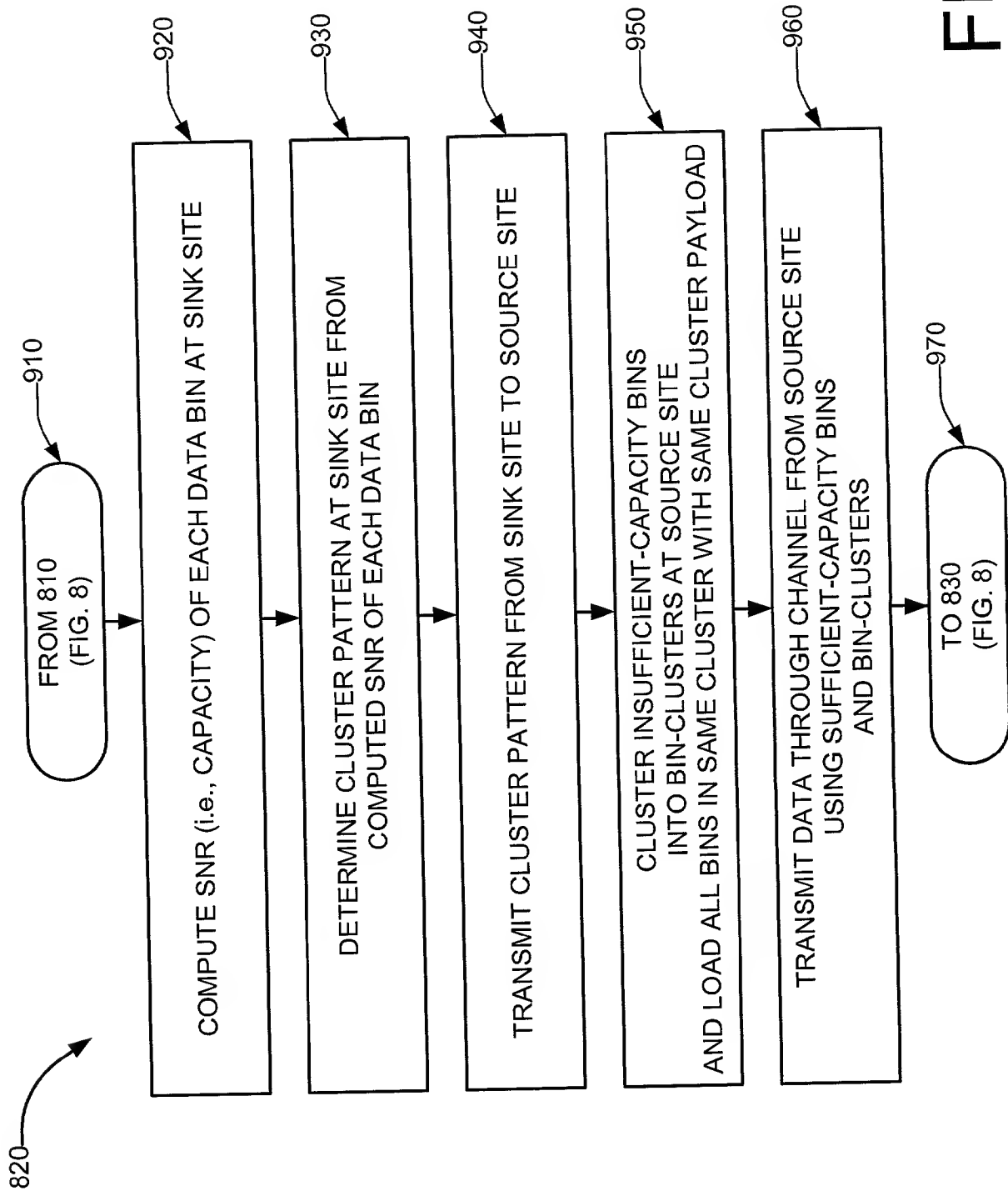


FIG. 9

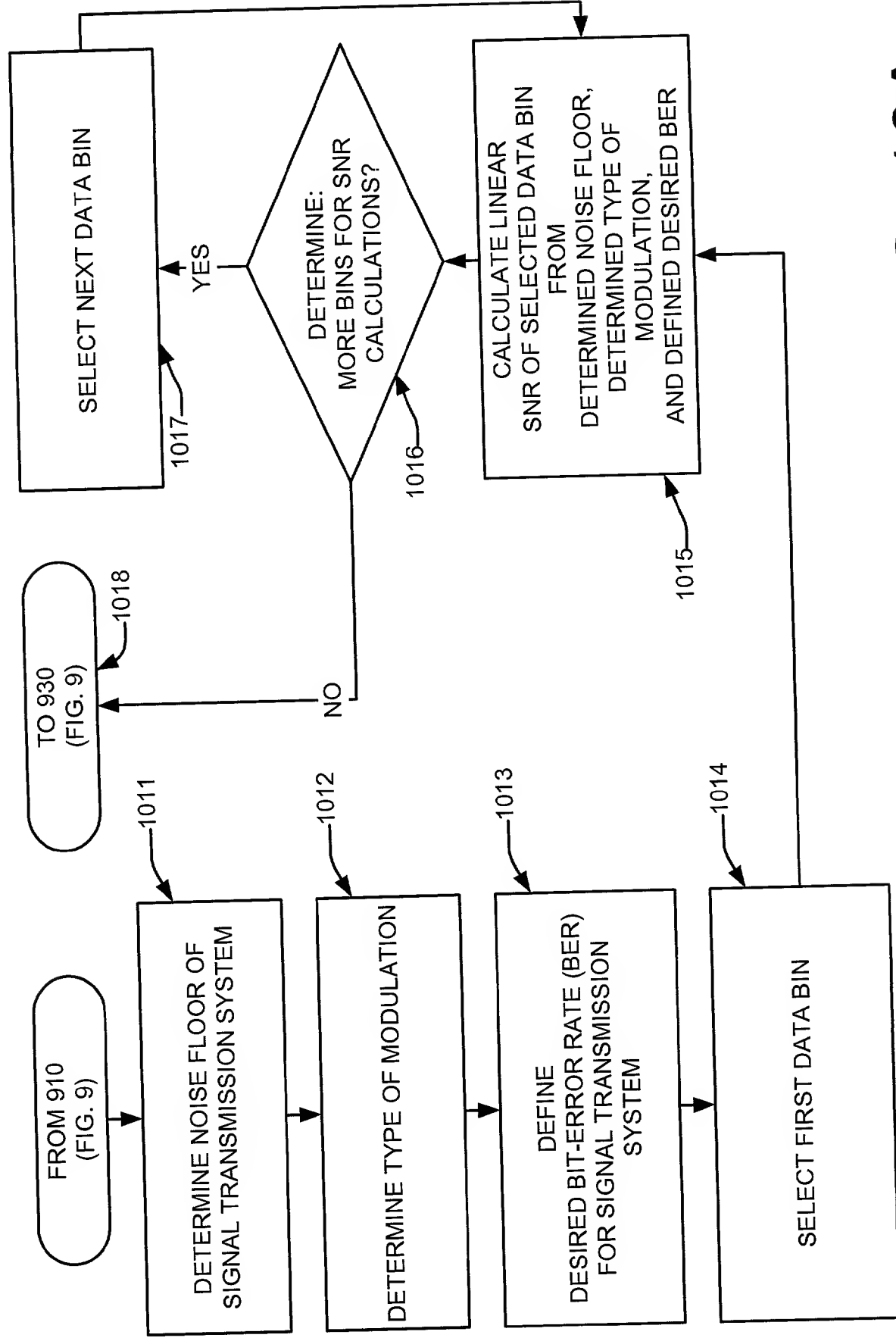


FIG. 10A

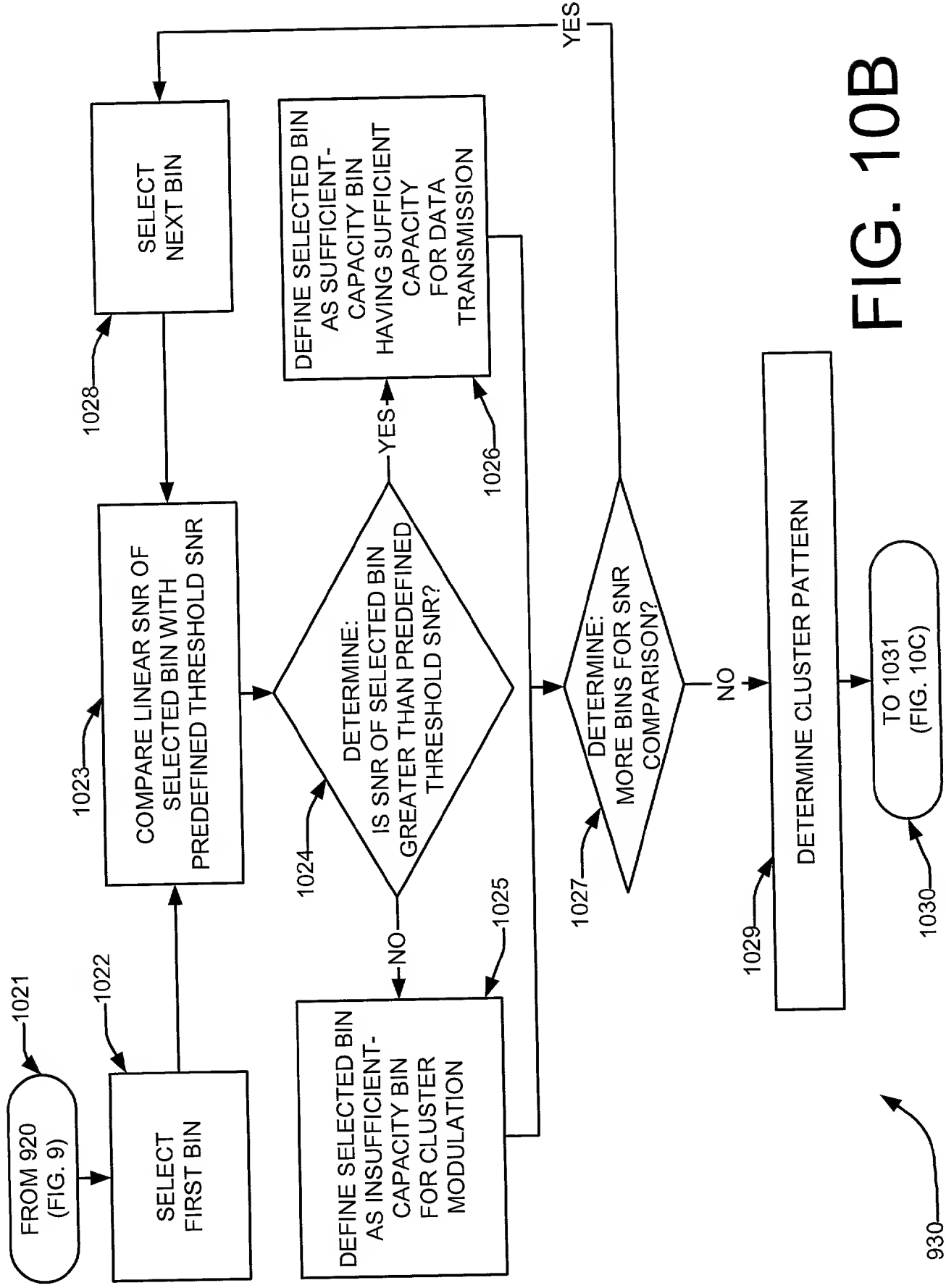


FIG. 10B

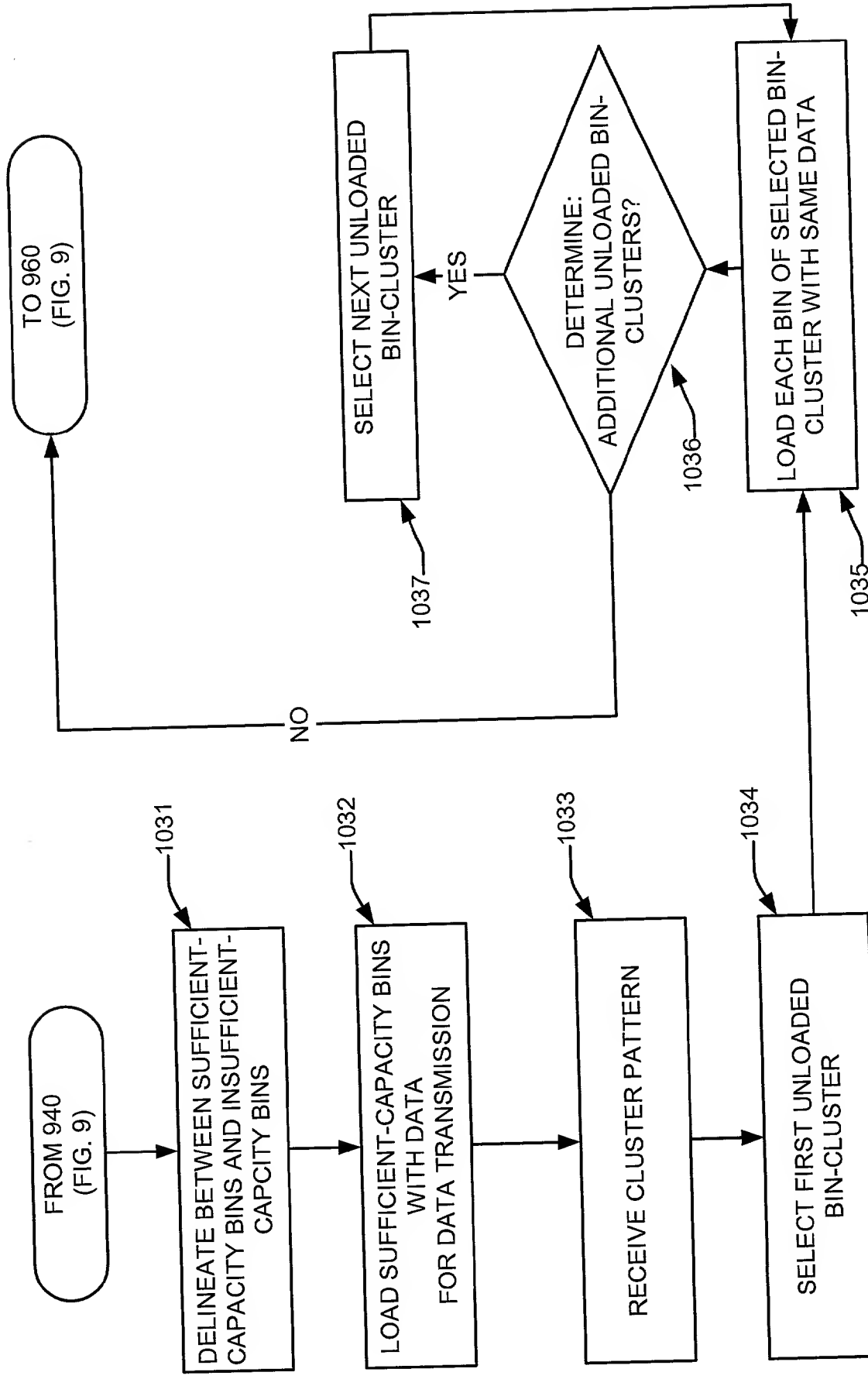


FIG. 10C

950

1029

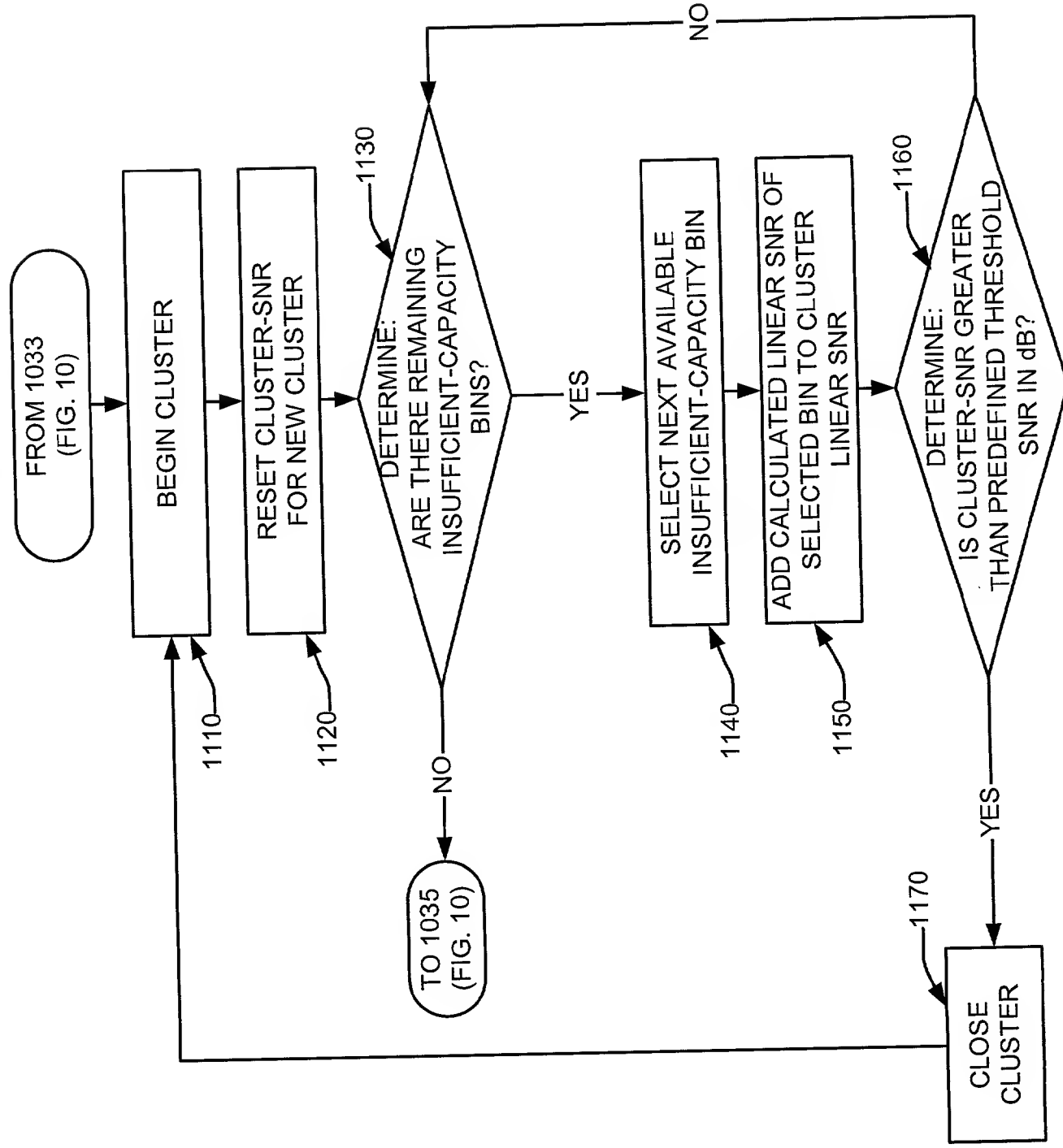


FIG. 11

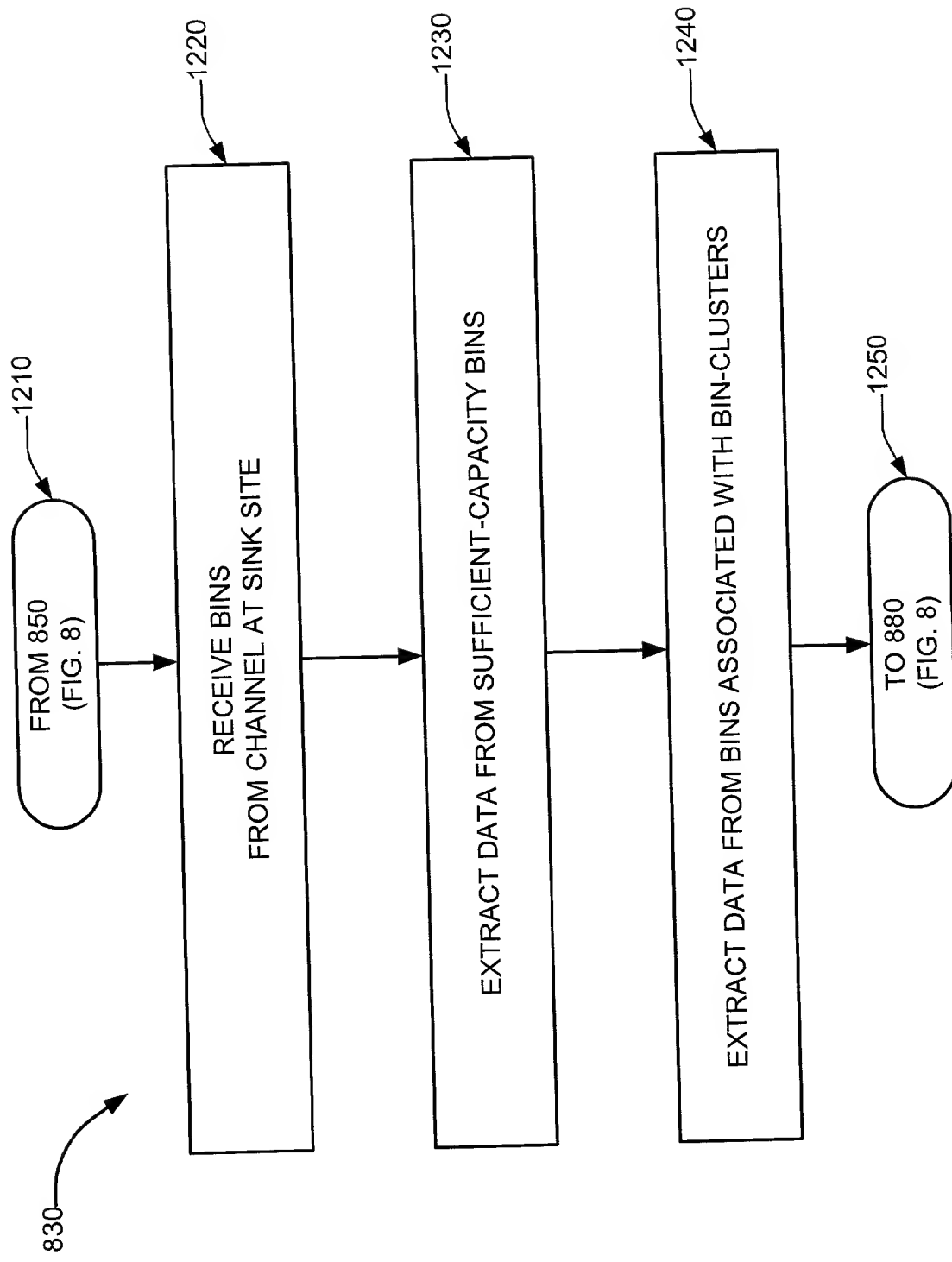


FIG. 12

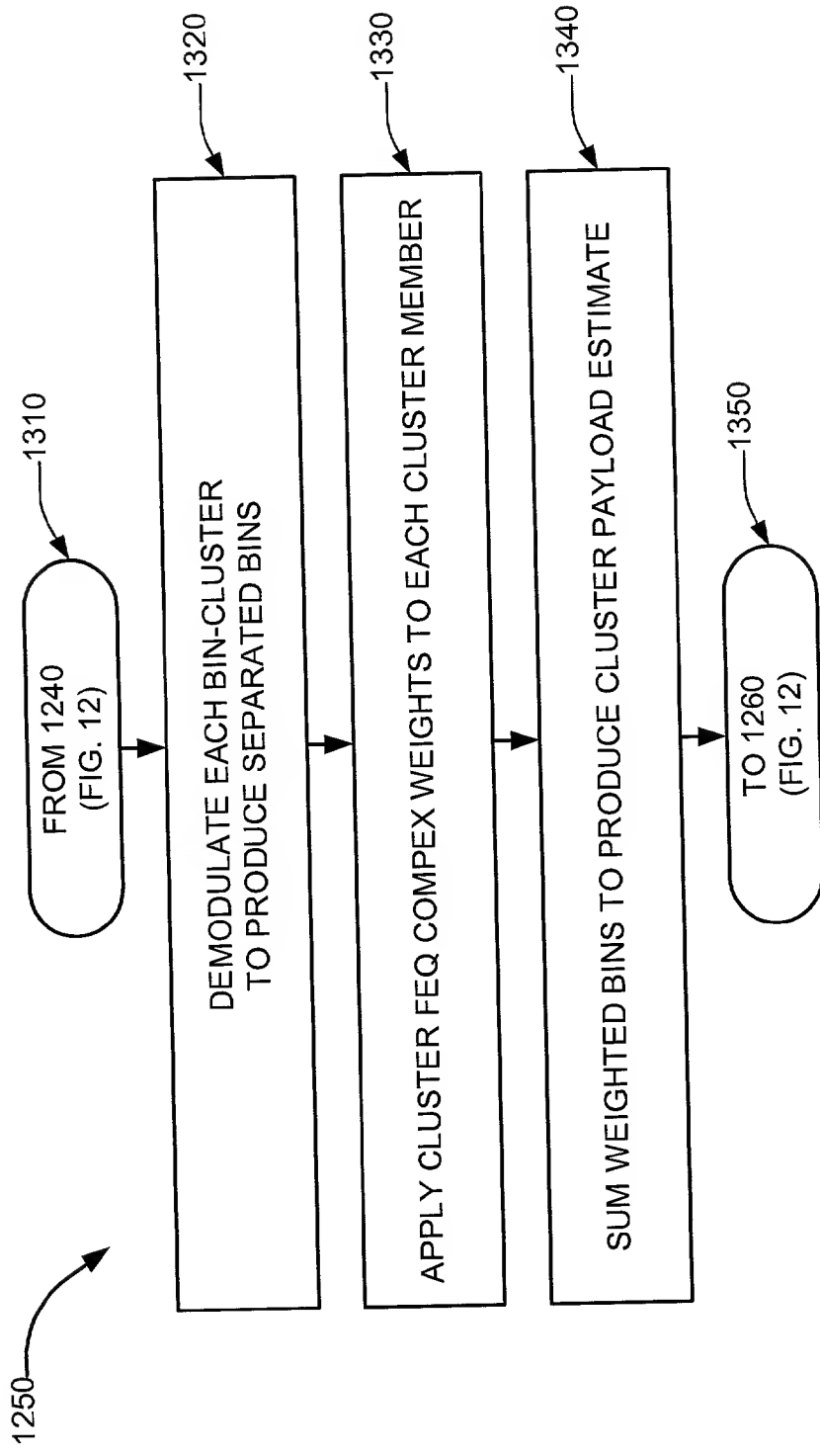


FIG. 13

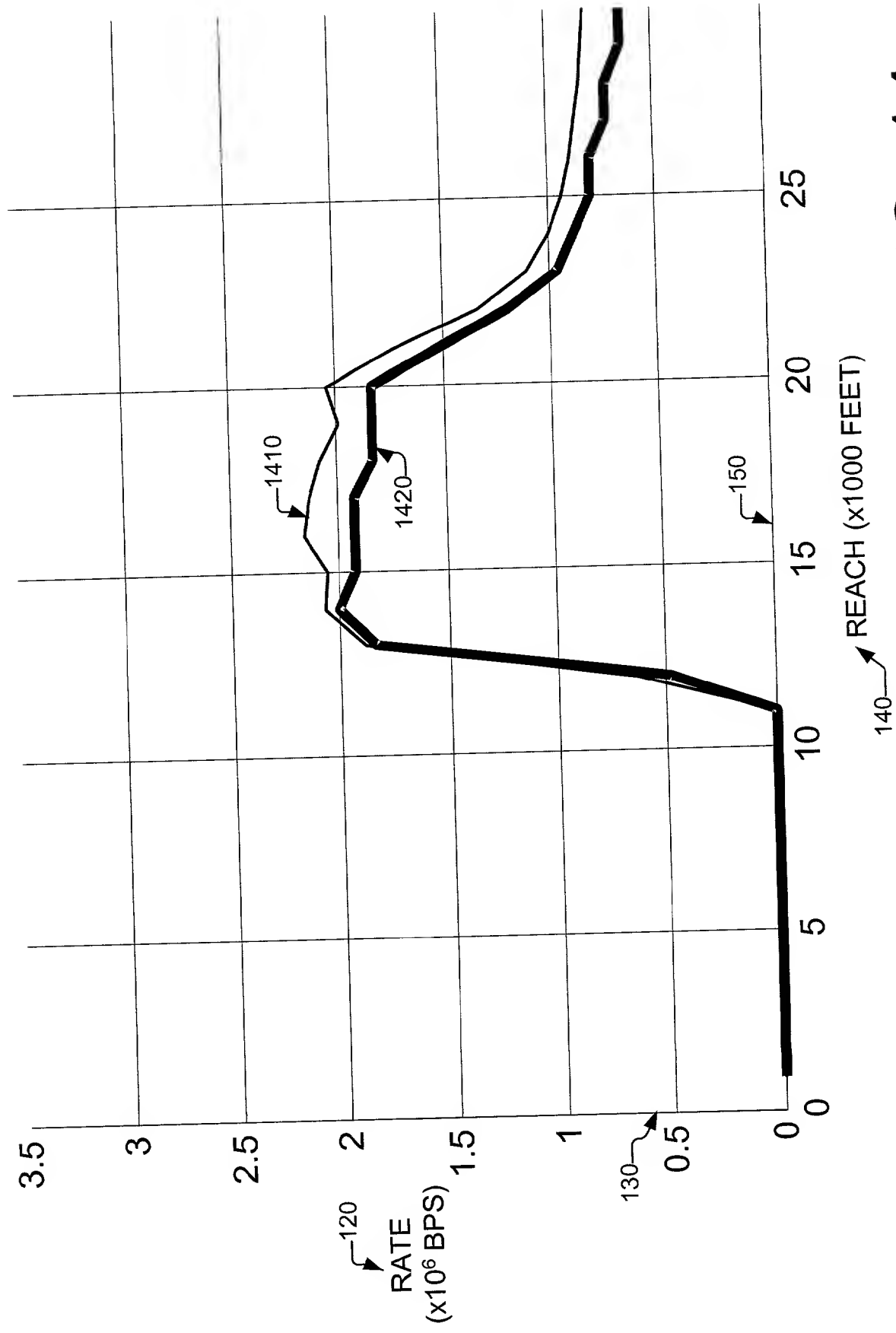


FIG. 14

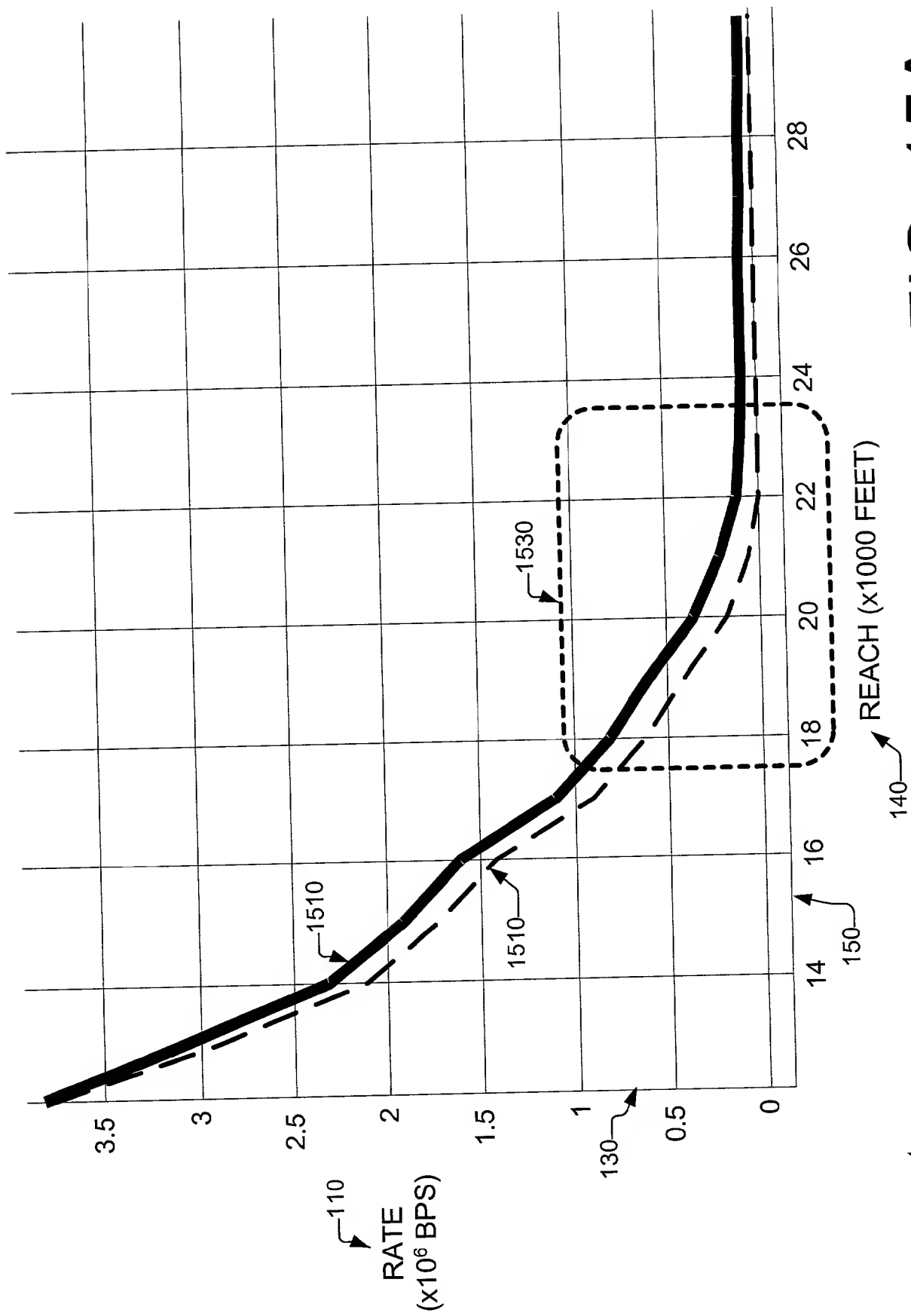


FIG. 15A

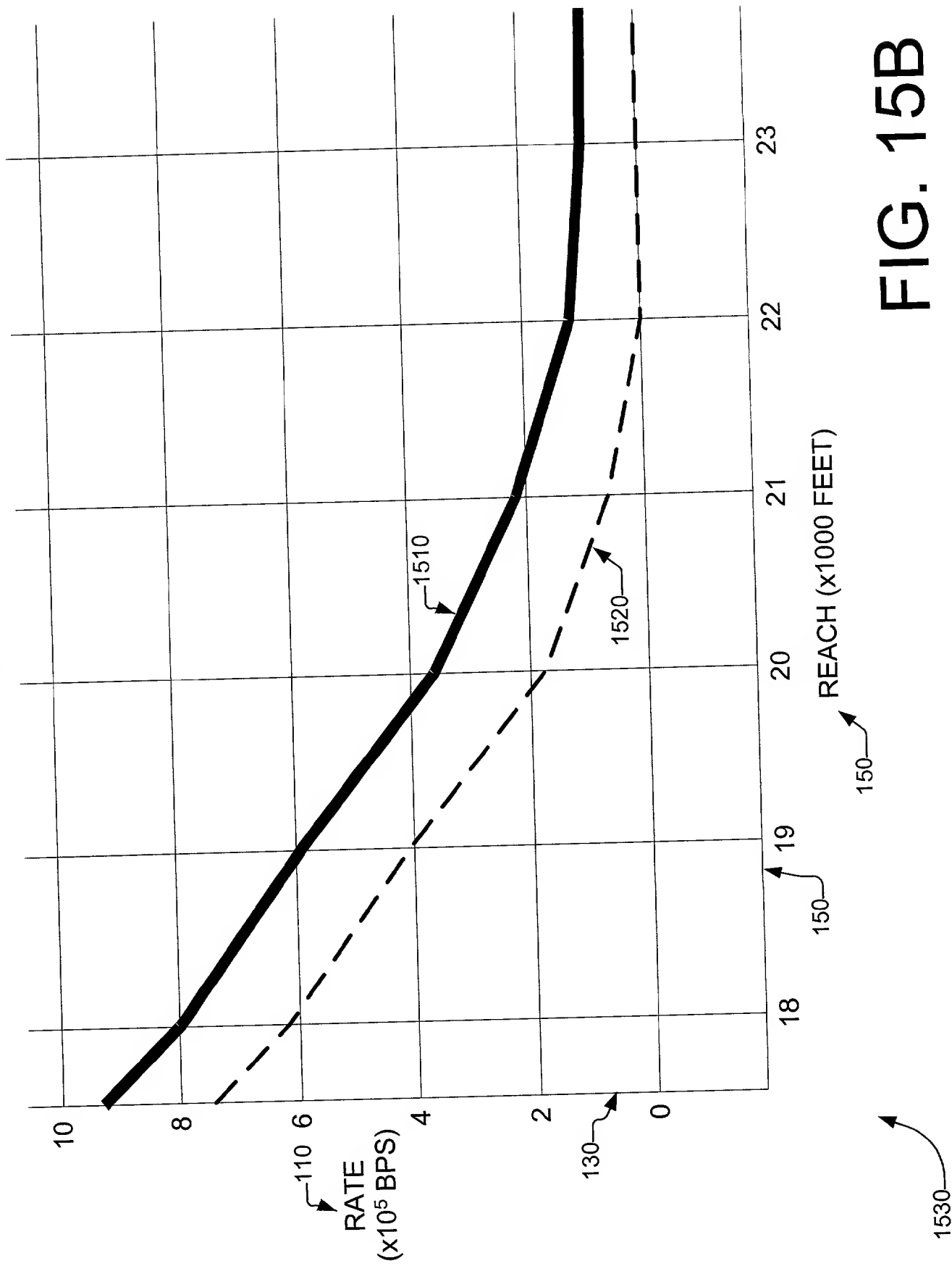


FIG. 15B

FIG. 15C is a graph showing the relationship between the rate of data transmission and the reach of the system. The rate of data transmission is measured in bits per second (BPS) and the reach is measured in feet. The graph shows that the rate of data transmission increases as the reach of the system increases, up to a point where the rate of data transmission begins to decrease.

